FACT SHEET FOR NPDES PERMIT WA-003134-8
PUGLIA ENGINEERING, INC.

TABLE OF CONTENTS

INTRODUCTION

The Federal Clean Water Act (FCWA, 1972, and later modifications, 1977, 1981, and 1987) established water quality goals for the navigable (surface) waters of the United States. One of the mechanisms for achieving the goals of the Clean Water Act is the National Pollutant Discharge Elimination System of permits (NPDES permits), which is administered by the Environmental Protection Agency (EPA). The EPA has delegated responsibility to administer the NPDES permit program to the state of Washington on the basis of Chapter 90.48 RCW which defines the Department of Ecology's authority and obligations in administering the wastewater discharge permit program.

The regulations adopted by the state include procedures for issuing permits (Chapter 173-220 WAC), water quality criteria for surface and ground waters (Chapters 173-201A and 200 WAC), and sediment management standards (Chapter 173-204 WAC). These regulations require that a permit be issued before discharge of wastewater to waters of the state is allowed. The regulations also establish the basis for effluent limitations and other requirements which are to be included in the permit. One of the requirements (WAC 173-220-060) for issuing a permit under the NPDES permit program is the preparation of a draft permit and an accompanying fact sheet. Public notice of the availability of the draft permit is required at least thirty (30) days before the permit is issued (WAC 173-220-050). The fact sheet and draft permit are available for review (see Appendix A--Public Involvement of the fact sheet for more detail on the public notice procedures).

The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in this review have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response. The fact sheet will not be revised. Comments and the resultant changes to the permit will be summarized in Appendix D--Response to Comments.

GENERAL INFORMATION	
Applicant	Puglia Engineering, Inc.
Facility Name and Address	201 Harris Avenue Bellingham, WA 98225-7018
Type of Facility	Ship Building and Repairing
SIC Code	3731
Discharge Location	Waterbody Name: Bellingham Bay Latitude: 48° 43' 15" N. Longitude: 122° 30' 48" W.
Water Body ID Number	WA-01-0050

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

HISTORY

The property, operating now as Puglia Engineering, Inc., has been operated as a shipyard since the turn of the century. Prior to 1986, the site was known as Fairhaven Shipyard. The NPDES permit was transferred from Maritime Contractors, Inc., to Bellingham Bay Shipyard on May 1, 1998. NPDES permit was transferred from Bellingham Bay Shipyard to Puglia Engineering, Inc. on July 5, 2002. The site is bordered by Bellingham Bay to the northwest, Arrowac Fisheries to the east, and the Bellingham Sewerage Treatment Plant to the south. Drydock No. 2 has been removed from the site and no ship repair occurred since the public notice of determination and the date of transfer.

INDUSTRIAL PROCESS

Puglia Engineering, Inc., operates one floating dry dock and one marine railway at the facility. Seventy-five to one hundred vessels have been worked on at this facility in a typical year under Bellingham Bay Shipyard.

Capacity of Drydocks and Marine Railway

Operation	Tonnage	Length	Width
Drydock No. 1	3,200 Tons	389 Feet	84 Feet
Marine Railway Carriage	500	85	34

The marine railway can haul up to three vessels out of the bay for maintenance and repair. The basic function of the drydock is the repair of ships and the cleaning, and painting of ships' bottoms, propellers, rudders, and the external parts below the water line or the construction of new ships. Drydocks supply electricity and fresh water to the ship in drydock from lines attached to or embedded in the drydock.

Shops providing services at Puglia Engineering are the Machine Shop, Paint Shop, Electrical Shop, and Steel Fabrication Shop.

Another source of wastewater is source body water flowing through the open ends of the U-shaped trough of the drydock and over the pontoon deck as the dock is sunk. As the dock is raised, water flows out through the ends and other openings of the drydock and returns to the source body. This is termed flood water. The quality of the return flow relative to the source is dependent upon the amount and type of debris that is present on the side wall and on the deck surfaces prior to sinking.

About 50 percent of vessels require sandblasting each year, consuming 630 tons of sandblast abrasive. Sand blasting consists of propelling a metallic or nonmetallic grit by compressed air to forcibly impinge on the surface being cleaned. Metallic grit includes utility slag, copper slag, or aluminum. Non-metallic grit includes recycled glass of various sizes and sodium bicarbonate.

Sandblasting, also called dryblasting, is used to prepare hulls for paints that require a new profile for paint adherence such as polyethylene. The debris from the sandblast operations is picked up by scoop tractors, hand shovels, or other methods for transfer to hoppers or skip boxes. The sand blast shed consists of a rigid building with doors and a dust collector system. A disposal firm picks up spent sand blast grit for reuse as cement calciner feedstock..

About 50 percent of vessels require hydroblasting. All pressure wash wastewater is collected on the drydocks and marine railway and discharged to the city sanitary sewer. The collection and treatment of pressure wash wastewater at Puglia Engineering eliminated the discharge of a significant industrial process wastewater stream to Bellingham Bay. Pressure wash wastewater, whether treated or untreated, is not allowed to enter the Bay.

Paint is stored in a bermed waste storage shed. Engine repair services are provided by sub contractors two to four times per year.

Bilge water, ballast water, and hydraulic fluids are hauled by an environmental transport company. Gray water and sanitary sewage are hard piped to the Bellingham Sanitary Sewer or hauled by a sewage disposal pump truck.

In addition to pressure wash wastewater and stormwater, another type of shipyard discharge is drydock flood water. Drydock flood water is discharged when work is completed on a vessel and the drydock is flooded in order to float the vessel off of the drydock. Materials that may have accumulated on the floor of the drydock, such as spent abrasive grit, oil, paints, and solvents, are potential pollution sources to the receiving water. Best Management Practices (BMPs) must be used prior to flooding to prevent contamination of the receiving water.

DISCHARGE OUTFALL

The catch basins receive stormwater contaminated from work area track out such as the Sandblast Shed. Stormwater run-off is collected in six catch basins and discharged through the 12-inch PVC Outfall 03 to Bellingham Bay. However, this comprises only 5 percent of total stormwater collected on the four acre site. Ninety-five percent of stormwater infiltrates through gravel into Bellingham Bay.

The catch basins are shown on the attached site map. CB-1 through CB-3 in the vicinity of the Machine and Fabrication Shops were part of an existing storm water drainage system. Catch basins CB-4 through CB-6 were constructed and catch basins CB-1 through CB-3 were tied into the main trunk line leading to Outfall 003. Catch basins CB-1, CB-2, and CB-3 are limited to the vicinity of the Machine and Fabrication Shops. Catch basin CB-4 drains the areas adjacent to the Maintenance and Mechanical Shops. Catch basins CB-1 through CB-4 are largely surrounded by non-paved gravel surface areas, including the facility parking lot in front of the main office, which allow infiltration of stormwater thus limiting the amount of stormwater entering these catch basins. CB-5 and CB-6 drain the main paved portions of the site, including the vicinity of the Sandblast Shed, the Paint Shop, and the hazardous material storage areas.

Catch Basins CB-1, CB-2, CB-3 and CB-4 are not located on the site now occupied by Puglia. The catch basins are located on the adjacent property now occupied by a tenant of the Port of Bellingham. The four catch basins are connected to Puglia catch basins CB-5 and CB-6 which are located down hill of CB-1 through CB-4. This current design allows pollutants from outside sources to flow through Puglia catch basins. Puglia has requested the Port of Bellingham to sever the connection between the two systems.

The marine railway sidetrack and the storage areas on the northwest quarter of the site are underlain by gravel surfaces. The marine railway pressure wash waste water discharges to a lined collection basin underneath the carriage work area. Therefore, the carriage does not discharge flood water to Bellingham Bay and no monitoring marine way flood water monitoring is required.

The above ground diesel and gasoline fuel tanks on the east side of the facility, south and adjacent to the oil waste storage, are in covered impervious concrete containment.

PERMIT STATUS

The previous permit for this facility was issued on June 12, 1995. The previous permit placed effluent limitations on the following discharges.

Pressure Wash Wastewater No Discharge

Drydock Flood Water

Parameter	Monthly Average	Daily Maximum
Oil and grease	10 mg/L	15 mg/L
Turbidity		10 NTU
pH	Within a range of 6.0 to 9.0 Standard Units	

Stormwater

Parameter	Monthly Average	Daily Maximum
Oil and grease	10 mg/L No visible sheen	15 mg/L
Turbidity	10 NTU or 5 NTU above background	
pH	Within a range of 6.0 to 8.0 Standard Units	

An application for permit renewal was submitted to the Department on March 31, 2000, and accepted by the Department on April 5, 2000.

SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT

The facility last received an inspection on August 9, 1999.

Bellingham Bay Shipyard discharges have caused exceedences of the metals criteria in Bellingham Bay.

WASTEWATER CHARACTERIZATION

The proposed wastewater discharge is characterized for the following regulated parameters based on the average concentrations from January 1, 1997, to November 1, 2000.

Table 1: Wastewater Characterization – Stormwater

Parameter	Concentration
Total Recoverable Copper	1400 µg/L
Total Recoverable Lead	72.4 µg/L
Total Recoverable Zinc	2560 µg/L
Oil and Grease	6.2 mg/L
Turbidity	4.3 NTU
Total Suspended Solids	142.3 mg/L

Table 2: Wastewater Characterization – Drydock 1 Flood Water

Parameter	Concentration
Total Recoverable Copper	76.2 µg/L
Total Recoverable Lead	15.4 µg/L
Total Recoverable Zinc	137 µg/L
Oil and Grease	0.96 mg/L
Turbidity Over Background	2.63 NTU
Total Suspended Solids	19.6 mg/L

Table 3: Wastewater Characterization – Drydock 2 Flood Water

Parameter	Concentration
Total Recoverable Copper	247 µg/L
Total Recoverable Lead	40.4 µg/L
Total Recoverable Zinc	241 µg/L
Oil and Grease	0.28 mg/L
Turbidity Over Background	4.86 NTU
Total Suspended Solids	17.8 mg/L

Measurements at other shipyards and in a 1993 METRO study found hydroblast wastewater well above acute and chronic water quality criteria.

PROPOSED PERMIT LIMITATIONS

Federal and state regulations require that effluent limitations set forth in an NPDES permit must be either technology- or water quality-based. Technology-based limitations are based upon the treatment methods available to treat specific pollutants. Technology-based limitations are set by regulation or developed on a case-by-case basis (40 CFR 125.3, and Chapter 173-220 WAC). Water quality-based limitations are based upon compliance with the Surface Water Quality Standards (Chapter 173-201A WAC), Ground Water Standards (Chapter 173-200 WAC), Sediment Quality Standards (Chapter 173-204 WAC) or the National Toxics Rule (Federal Register, Volume 57, No. 246, Tuesday, December 22, 1992). The more stringent of these two limits must be chosen for each of the parameters of concern. Each of these types of limits is described in more detail below.

The limits in this permit are based in part on information received in the application. The effluent constituents in the application were evaluated on a technology- and water quality-basis. The limits necessary to meet the rules and regulations of the state of Washington were determined and included in this permit. Ecology does not develop effluent limits for all pollutants that may be reported on the application as present in the effluent**.** Some pollutants are not treatable at the concentrations reported, are not controllable at the source, are not listed in regulation, and do not have a reasonable potential to cause a water quality violation**.** Effluent limits are not always developed for pollutants that may be in the discharge but not reported as present in the application. In those circumstances, the permit does not authorize discharge of the non-reported pollutants. Effluent discharge conditions may change from the conditions reported in the permit application. If significant changes occur in any constituent, as described in 40 CFR 122.42(a), the Permittee is required to notify the Department of Ecology. The Permittee may be in violation of the permit until the permit is modified to reflect additional discharge of pollutants.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

Pressure wash wastewater, whether treated or untreated, will not be allowed to enter Bellingham Bay. Collection, treatment, and recycle or discharge to the sewerage system of hydroblast wastewater is available technology and is used at most shipyards. Even most boatyards collect and recycle hull wash water. Hydroblast wastewater collection, treatment and recycle, evaporation or hauling to a sanitary sewerage system is determined to be the technology-based limitation cited in Chapter 173-220 WAC as all known, available, and reasonable methods of treatment (AKART) . All process water discharges directly to Bellingham Bay are prohibited.

Puglia Engineering will be required to continue to follow and improve as necessary Best Management Practices (BMPs). The drydock and marine railway will be cleaned to remove spent blasting abrasives and other solid wastes including paint chips, scrap metal, wood, plastic, paper, and welding rods. Prior to undocking, the drydocks will be returned to a clean condition using dry cleanup methods (i.e., brooms, vacuums...etc.). The minimum amount of water flushing necessary to return the marine way and the floating drydocks to a clean condition may be used as a final cleanup step as long as the wastewater is not directly discharged to Bellingham Bay. No change in turbidity between drydock flood waters and the ambient water will be allowed. Also, no visible sheen will be allowed. Photographs will be taken and maintained in a logbook to demonstrate the condition of the drydock floors prior to launching a vessel.

Waters of the state are especially vulnerable from painting and hull preparation directly over water. Over water work with tarping does not have the benefit of collection and discharge to the sanitary sewer or treatment to the surface water criteria as is proposed at Puglia Engineering for upland or drydock repair. Attaching tarps to floats is more difficult than from piers and the instability, exposure, and size of floats increases the risk of spills. BMP's to minimize discharges to Bellingham are required.

EPA measured a high concentration of oil and grease in flood water discharges. At Lake Union Drydock, a similar facility, only three exceedences above the detection limit, reported by Lake Union Drydock as 5 mg/L for oil and grease, occurred over the five year permit cycle from Drydock 5. Five exceedences were reported from Drydock 6 and only one exceedence was reported from Drydock 7. All these occurred in the first two years of the permit cycle. The other 113 reported measurements were less than 5 mg/L. This means 93 percent of all measurements from all drydocks were less than 5 mg/L. The distribution of the data is neither normally nor log normally distributed but is a flat distribution at less than 5 mg/L. This prevents the common method of determining technology-based effluent limits.

However, unquestionably, if 5 mg/L has not been exceeded in the last three years of the permit cycle, then it is an achievable discharge level at Puglia Engineering, a similar facility. This level of control has also been achieved for drydock flood waters at Dakota Creek, Duwamish, FOSS, and Northlake shipyards. Based on this achieved level of control and the best professional judgment of the Department, an oil and grease effluent limitation of 5 mg/L is AKART for the flood water discharges from Puglia Engineering drydocks.

To minimize oil and grease discharges, the Department will establish an oil and grease effluent limitation for stormwater from the upland yard of 5 mg/L. This level of control is AKART.

Hauling off site or discharging to the sanitary sewer wastewater from cooking, dish washing, and showers is determined to be AKART.

Recycling of solvents on site or off site disposal is AKART. Zero discharge from maintenance shops is determined to be AKART.

Discharge of bilge and ballast water from ships on drydocks by hauling off site for treatment or discharge to the sanitary sewerage system subsequent to approval is determined to be AKART.

SURFACE WATER QUALITY-BASED EFFLUENT LIMITATIONS

In order to protect existing water quality and preserve the designated beneficial uses of Washington's surface waters, WAC 173-201A-060 states that waste discharge permits shall be conditioned such that the discharge will meet established Surface Water Quality Standards. The Washington State Surface Water Quality Standards (Chapter 173-201A WAC) is a state regulation designed to protect the beneficial uses of the surface waters of the state. Surface water quality-based effluent limitations may be based on an individual waste load allocation (WLA) or on a WLA developed during a basin wide total maximum daily loading study (TMDL).

NUMERICAL CRITERIA FOR THE PROTECTION OF AQUATIC LIFE

"Numerical" water quality criteria are numerical values set forth in the state of Washington's Water Quality Standards for Surface Waters (Chapter 173-201A WAC). They specify the levels of pollutants allowed in a receiving water while remaining protective of aquatic life. Numerical criteria set forth in the Water Quality Standards are used along with chemical and physical data for the wastewater and receiving water to derive the effluent limits in the discharge permit. When surface water quality-based limits are more stringent or potentially more stringent than technology-based limitations, they must be used in a permit.

NUMERICAL CRITERIA FOR THE PROTECTION OF HUMAN HEALTH

The U.S. EPA has promulgated 91 numeric water quality criteria for the protection of human health that are applicable to Washington State (EPA, 1992). These criteria are designed to protect humans from cancer and other diseases and are primarily applicable to fish and shellfish consumption and drinking water from surface waters.

NARRATIVE CRITERIA

In addition to numerical criteria, "narrative" water quality criteria (WAC 173-201A-030) limit toxic, radioactive, or deleterious material concentrations below those which have the potential to adversely affect characteristic water uses, cause acute or chronic toxicity to biota, impair aesthetic values, or adversely affect human health. Narrative criteria protect the specific beneficial uses of all fresh (WAC 173-201A-130) and marine (WAC 173-201A-140) waters in the state of Washington.

ANTIDEGRADATION

The state of Washington's Antidegradation Policy requires that discharges into a receiving water shall not further degrade the existing water quality of the water body. In cases where the natural conditions of a receiving water are of lower quality than the criteria assigned, the natural conditions shall constitute the water quality criteria. Similarly, when the natural conditions of a receiving water are of higher quality than the criteria assigned, the natural conditions shall constitute the water quality criteria. More information on the state Antidegradation Policy can be obtained by referring to WAC 173-201A-070.

The Department has reviewed existing records and is unable to determine if ambient water quality is either higher or lower than the designated classification criteria given in Chapter 173-201A WAC; therefore, the Department will use the designated classification criteria for this water body in the proposed permit. The discharges authorized by this proposed permit should not cause a loss of beneficial uses.

CRITICAL CONDITIONS

Surface water quality-based limits are derived for the waterbody's critical condition, which represents the receiving water and waste discharge condition with the highest potential for adverse impact on the aquatic biota, human health, and existing or characteristic water body uses.

MIXING ZONES

The Water Quality Standards allow the Department of Ecology to authorize mixing zones around a point of discharge in establishing surface water quality-based effluent limits. Both "acute" and "chronic" mixing zones may be authorized for pollutants that can have a toxic effect on the aquatic environment near the point of discharge. The concentration of pollutants at the boundary of these mixing zones may not exceed the numerical criteria for that type of zone. Mixing zones can only be authorized for discharges that are receiving all known, available, and reasonable methods of prevention, control, and treatment (AKART) and in accordance with other mixing zone requirements of WAC 173-201A-100.

The National Toxics Rule (EPA, 1992) allows the chronic mixing zone to be used to meet human health criteria.

DESCRIPTION OF THE RECEIVING WATER

The facility discharges to Bellingham Bay, which is designated as a Class B receiving water in the vicinity of the outfall. Other nearby point source outfalls include a concrete batching plant and a boatyard. Significant nearby non-point sources of pollutants include a number of storm drain outfalls. Characteristic uses include the following:

> water supply (industrial, agricultural); stock watering; fish migration; fish rearing, spawning and harvesting; wildlife habitat; secondary contact recreation; sport fishing; boating and aesthetic enjoyment; commerce and navigation. Water quality of this class shall meet or exceed the requirements for most uses.

SURFACE WATER QUALITY CRITERIA

Applicable criteria are defined in Chapter 173-201A WAC for aquatic biota. In addition, U.S. EPA has promulgated human health criteria for toxic pollutants (EPA, 1992). Criteria for this discharge are summarized below:

Turbidity	less than 10 NTU above background
Acute Criteria Cu	4.8 µg/l
Acute Criteria Pb	210 µg/l
Acute Criteria Zn	90 µg/l

The 1998 Section 303(d) report lists water bodies that do not meet water quality criteria. Bellingham Bay is included in this report due to contamination of sediment by petroleum hydrocarbons, copper, lead, mercury, arsenic, polychlorinated biphenyls (PCBs), zinc, and sediment bioassay and have caused this water body to be placed on the 1998 Section 303(d) list that the Department submitted to the United States Environmental Protection Agency (USEPA) to delineate areas that are water quality-limited.

A total maximum daily load study for contaminated sediments is ongoing.

Federal criterion for oil and grease is “waters are to remain essentially free of oil and grease of petroleum origin.”

CONSIDERATION OF SURFACE WATER QUALITY-BASED LIMITS FOR NUMERIC CRITERIA

Pollutant concentrations in the proposed discharge exceed water quality criteria with technology-based controls which the Department has determined to be AKART. A mixing zone is authorized in accordance with the geometric configuration, flow restriction, and other restrictions for mixing zones in Chapter 173-201A WAC and is defined as follows:

> Puglia Engineering's storm water pipe is slightly oversized to prevent back-up in the conveyance system (caused by excessive head loss), overflow of catch basins, and flooding of the yard. As a result, discharge velocities exiting the outfall are relatively low. Near-field conditions are developed only within a few feet of the outfall, and the plume quickly transitions to far-field conditions.

The dilution factors of effluent to receiving water that occur within these zones have been determined at the critical condition by the use of PLUMES 3RD edition. The dilution factors have been determined to be (from *Effluent Mixing Study, Maritime Contractors, Inc., Bellingham, Washington,* and November 29, 1995):

	Acute	Chronic
Aquatic Life	85	640

Pollutants in an effluent may affect the aquatic environment near the point of discharge (near-field) or at a considerable distance from the point of discharge (far-field). Toxic pollutants, for example, are near-field pollutants--their adverse effects diminish rapidly with mixing in the receiving water. Conversely, a pollutant such as BOD is a far-field pollutant whose adverse effect occurs away from the discharge even after dilution has occurred. Thus, the method of calculating surface water quality-based effluent limits varies with the point at which the pollutant has its maximum effect.

The derivation of surface water quality-based limits also takes into account the variability of the pollutant concentrations in both the effluent and the receiving water.

Critical acute conditions include discharge during maximum stratification of the water column (during late summer), at low tide (water depth below mean lower low water) and slack current, one centimeter per second (lowest 10th percentile ambient current velocity). Critical chronic conditions are similar, except that an average value is used for the ambient current, five cm/sec, (50th percentile current velocity).

Turbidity--Due to the potential fluctuations in turbidity of the receiving water and the effluent, turbidity monitoring is required to assess compliance with the water quality criteria for turbidity. The criteria for turbidity allows no more than a 5 NTU increase over background turbidity.

Toxic Pollutants--Federal regulations (40 CFR 122.44) require NPDES permits to contain effluent limits for toxic chemicals in an effluent whenever there is a reasonable potential for those chemicals to exceed the surface water quality criteria. This process occurs concurrently with the derivation of technology-based effluent limits. Facilities with technology-based effluent limits defined in regulation are not exempted from meeting the Water Quality Standards for Surface Waters or from having surface water quality-based effluent limits.

The following toxics were determined to be present in the discharge: heavy metals. Effluent limits were calculated using methods from EPA, 1991, as shown in Appendix C. Even with virtually no background, Puglia Engineering stormwater discharges exceed criteria.

The proposed permit contains a compliance schedule for meeting the water quality-based limits for metals and turbidity. Prior to authorizing this compliance schedule, the Department required the Permittee to evaluate the possibility of complying with the limitations by changes other than construction. The Permittee responded that mechanisms such as change of the facility operation or pollution prevention would not enable compliance with the limits.

Bellingham Bay Shipyard's preferred alternative is to discharge stormwater to the city of Bellingham Wastewater Treatment Facility. Puglia Engineering must submit for approval an engineering report for the final selected treatment technology to achieve surface water quality criteria. The pumps and collection system will be sized to the peak hour flow of the 10-year, 24-hour storm event consistent with the FOSS Maritime stormwater treatment system. Direct discharges will occur about once every ten (10) years.

WHOLE EFFLUENT TOXICITY

Toxicity caused by unidentified pollutants is not expected in the effluent from this discharge as determined by the screening criteria given in Chapter 173-205 WAC. Therefore, no whole effluent toxicity testing is required in this permit. The Department may require effluent toxicity testing in the future if it receives information that toxicity may be present in this effluent.

HUMAN HEALTH

Washington’s Water Quality Standards now include 91 numeric health-based criteria that must be considered in NPDES permits. These criteria were promulgated for the state by the U.S. EPA in its National Toxics Rule (Federal Register, Volume 57, No. 246, Tuesday, December 22, 1992).

The Department has determined that the applicant's discharge is unlikely to contain chemicals regulated for human health.

SEDIMENT QUALITY

The Department has promulgated aquatic sediment standards (Chapter 173-204 WAC) to protect aquatic biota and human health. These standards state that the Department may require Permittees to evaluate the potential for the discharge to cause a violation of applicable standards (WAC 173-204-400). The Department has sufficient data on sediments in the area of the Permittee’s discharge. Any additional requirement of sediment will be pursued through regulatory order.

GROUND WATER QUALITY LIMITATIONS

The Department has promulgated Ground Water Quality Standards (Chapter 173-200 WAC) to protect beneficial uses of ground water. Permits issued by the Department shall be conditioned in such a manner so as not to allow violations of those standards (WAC 173-200-100).

This Permittee has no discharge to ground from work areas and therefore no limitations are required based on potential effects to ground water.

COMPARISON OF EFFLUENT LIMITS WITH THE EXISTING PERMIT ISSUED JUNE 22, 1995

Parameter	Existing Limits	Proposed Limits
Pressure Wash Wastewater	No Direct Discharge	No Direct Discharge
Stormwater		
Oil and grease	10 mg/L Daily Maximum 15 mg/L Monthly Average	5 mg/L Daily Maximum
Turbidity	5 NTU above background	10 NTU and 5 NTU above background
pH	within a range of 6.0 to 8.0	none

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are required (WAC 173-220-210 and 40 CFR 122.41) to verify that the treatment process is functioning correctly and the effluent limitations are being achieved.

Drydock flood water monitoring is eliminated except for oil and grease. Flood water discharges are indistinguishable and are masked by receiving source water.

Stormwater monitoring for metals, oil and grease, and turbidity is being required to further characterize the effluent. These pollutants could have a significant impact on the quality of the surface water.

The monitoring schedule is detailed in the proposed permit under Condition S.2. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

This permit requires the Permittee to monitor the stormwater outfalls on a twice per month schedule consistent with MARCO, Pacific Fishermen, and Fishing Vessel Owners Marine Ways.

A visual observation and log with photographs shall be maintained of each lowering of the drydocks.

LAB ACCREDITATION

With the exception of certain parameters, the permit requires all monitoring data to be prepared by a laboratory registered or accredited under the provisions of Chapter 173-50 WAC, *Accreditation of Environmental Laboratories.*

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

The conditions of S3 are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 173-220-210).

SPILL PLAN

The Department has determined that the Permittee stores a quantity of chemicals that have the potential to cause water pollution if accidentally released. The Department has the authority to require the Permittee to develop best management plans to prevent this accidental release under section 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080.

The Permittee has developed a plan for preventing the accidental release of pollutants to state waters and for minimizing damages if such a spill occurs. The proposed permit requires the Permittee to update this plan within the stormwater pollution prevention plan.

SOLID WASTE PLAN

The Department has determined that the Permittee has a potential to cause pollution of the waters of the state from leachate of solid waste.

This proposed permit requires, under the authority of RCW 90.48.080, that the Permittee update the solid waste plan within the stormwater pollution prevention plan designed to prevent solid waste from causing pollution of the waters of the state.

GENERAL CONDITIONS

General Conditions are based directly on state and federal law and regulations and have been standardized for all individual industrial NPDES permits issued by the Department.

PERMIT ISSUANCE PROCEDURES

PERMIT MODIFICATIONS

The Department may modify this permit to impose numerical limitations, if necessary, to meet Water Quality Standards for Surface Waters, Sediment Quality Standards, or Water Quality Standards for Ground Waters, based on new information obtained from sources such as inspections, effluent monitoring, outfall studies, and effluent mixing studies.

The Department may also modify this permit as a result of new or amended state or federal regulations.

RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics, protect human health, aquatic life, and the beneficial uses of waters of the state of Washington. The Department proposes that this proposed permit be issued for five (5) years. This is consistent with the Nooksack Water Quality Management Area (WQMA) cycle.

REFERENCES FOR TEXT AND APPENDICES

Environmental Protection Agency (EPA)

1992. National Toxics Rule. Federal Register, V. 57, No. 246, Tuesday, December 22, 1992.

1991. Technical Support Document for Water Quality-based Toxics Control. EPA/505/2-90-001.

1988. Technical Guidance on Supplementary Stream Design Conditions for Steady State Modeling. USEPA Office of Water, Washington, D.C.

1985. Water Quality Assessment: A Screening Procedure for Toxic and Conventional Pollutants in Surface and Ground Water. EPA/600/6-85/002a.

1983. Water Quality Standards Handbook. USEPA Office of Water, Washington, D.C.

Tsivoglou, E.C., and J.R. Wallace.

1972. Characterization of Stream Reaeration Capacity. EPA-R3-72-012. (Cited in EPA 1985 op.cit.)

Washington State Department of Ecology.

1994. Permit Writer's Manual. Publication Number 92-109

Wright, R.M., and A.J. McDonnell.

1979. In-stream Deoxygenation Rate Prediction. Journal Environmental Engineering Division, ASCE. 105(EE2). (Cited in EPA 1985 op.cit.)

APPENDIX A--PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to reissue a permit to the applicant listed on page one of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public Notice of Application (PNOA) was published on April 10 and 17, 2000, in the *Bellingham Herald* to inform the public that an application had been submitted and to invite comment on the reissuance of this permit.

The Department published a Public Notice of Draft (PNOD) on February 15, 2001, in the *Bellingham Herald* to inform the public that a draft permit and fact sheet are available for review. Interested persons were invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents are available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments should be mailed to:

Water Quality Permit Coordinator
Department of Ecology
Northwest Regional Office
3190 160th Avenue SE
Bellevue, WA 98008-5452

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30) day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-220-090). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing (WAC 173-220-100).

Comments should reference specific text followed by proposed modification or concern when possible. Comments may address technical issues, accuracy and completeness of information, the scope of the facility's proposed coverage, adequacy of environmental protection, permit conditions, or any other concern that would result from issuance of this permit.

The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, 425-649-7293, or by writing to the address listed above.

This permit and fact sheet were written by John Drabek, PE.

APPENDIX B--GLOSSARY

Acute Toxicity--The lethal effect of a compound on an organism that occurs in a short period of time, usually 48 to 96 hours.

AKART--An acronym for "all known, available, and reasonable methods of treatment."

Ambient Water Quality--The existing environmental condition of the water in a receiving water body.

Ammonia--Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

Average Monthly Discharge Limitation--The average of the measured values obtained over a calendar month's time.

Best Management Practices (BMPs)--Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural, and/or managerial practices to prevent or reduce the pollution of waters of the state. BMPs include treatment systems, operating procedures, and practices to control: plant site run-off, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD_5--Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD_5 is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the Federal Clean Water Act.

Bypass--The intentional diversion of waste streams from any portion of a treatment facility.

Chronic Toxicity--The effect of a compound on an organism over a relatively long time, often 1/10 of an organism's lifespan or more. Chronic toxicity can measure survival, reproduction or growth rates, or other parameters to measure the toxic effects of a compound or combination of compounds.

Clean Water Act (CWA)--The Federal Water Pollution Control Act enacted by Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483, 97-117; USC 1251 et seq.

Compliance Inspection - Without Sampling--A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance Inspection - With Sampling--A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Additional sampling may be conducted.

Composite Sample--A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite" (collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots).

Construction Activity--Clearing, grading, excavation, and any other activity which disturbs the surface of the land. Such activities may include road building, construction of residential houses, office buildings, or industrial buildings, and demolition activity.

Continuous Monitoring--Uninterrupted, unless otherwise noted in the permit.

Critical Condition--The time during which the combination of receiving water and waste discharge conditions have the highest potential for causing toxicity in the receiving water environment. This situation usually occurs when the flow within a water body is low, thus, its ability to dilute effluent is reduced.

Dilution Factor--A measure of the amount of mixing of effluent and receiving water that occurs at the boundary of the mixing zone. Expressed as the inverse of the percent effluent fraction e.g., a dilution factor of 10 means the effluent comprises 10% by volume and the receiving water 90%.

Engineering Report--A document which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Fecal Coliform Bacteria--Fecal coliform bacteria are used as indicators of pathogenic bacteria in the effluent that are harmful to humans. Pathogenic bacteria in wastewater discharges are controlled by disinfecting the wastewater. The presence of high numbers of fecal coliform bacteria in a water body can indicate the recent release of untreated wastewater and/or the presence of animal feces.

Grab Sample--A single sample or measurement taken at a specific time or over as short period of time as is feasible.

Industrial Wastewater--Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

Major Facility--A facility discharging to surface water with an EPA rating score of >80 points based on such factors as flow volume, toxic pollutant potential, and public health impact.

Maximum Daily Discharge Limitation--The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

Method Detection Level (MDL)--The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

Minor Facility--A facility discharging to surface water with an EPA rating score of <80 points based on such factors as flow volume, toxic pollutant potential, and public health impact.

Mixing Zone--An area that surrounds an effluent discharge within which water quality criteria may be exceeded. The area of the authorized mixing zone is specified in a facility's permit and follows procedures outlined in state regulations (Chapter 173-201A WAC).

National Pollutant Discharge Elimination System (NPDES)--The NPDES (Section 402 of the Clean Water Act) is the federal wastewater permitting system for discharges to navigable waters of the United States. Many states, including the state of Washington, have been delegated the authority to issue these permits. NPDES permits issued by Washington State permit writers are joint NPDES/state permits issued under both state and federal laws.

pH--The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

Quantitation Level (QL)--A calculated value five times the MDL (method detection level).

Responsible Corporate Officer--A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures (40 CFR 122.22).

Technology-based Effluent Limit--A permit limit that is based on the ability of a treatment method to reduce the pollutant.

Total Suspended Solids (TSS)--Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

State Waters--Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Stormwater--That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

Upset--An exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack of preventative maintenance, or careless or improper operation.

Water Quality-based Effluent Limit--A limit on the concentration of an effluent parameter that is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into a receiving water.

APPENDIX C--TECHNICAL CALCULATIONS AND SITE MAPS

APPENDIX D--RESPONSE TO COMMENTS

RESPONSIVENESS SUMMARY FOR THE PUGLIA ENGINEERING, INC. NPDES PERMIT

The Department received comments from Derek Wentorf of the Puget Soundkeeper Alliance and Robyn Du Pre of the North Sound BayKeeper and Phil Moses of Bellingham Bay Shipyards, LLC.

Bellingham Bay Shipyard did not operate between the close of the comment period and the transfer of the NPDES permit to Puglia Engineering, Inc. on July 1, 2002.

Drydock No. 2 has been moved from the facility and discharges will not be included in the new permit.

Catch Basins CB-1, CB-2, CB-3 and CB-4 are not located in the area of shipyard activity at Puglia Engineering, Inc., will not be discharging shipyard wastewater and will not be covered by this shipyard permit. Catch Basins CB-5 and CB-6 are within the shipyard and are included in the permit.

1. The Puget Soundkeeper Alliance supports the prohibition of ballast water directly on the floors of the dry dock and then discharge to surface water. The issue with ballast water is where did it come from and is it contaminated with invasive species, cholera, dinoflagellates the cause paralytic shellfish poisoning or other pollutants like oil or grease. It is recommended by NOAA and Sea Grant that ballast water be exchanged in the open ocean as safety permits and that the ship keep a record of its ballasting operation. Vessels should be prohibited from discharging ballast water while at a shipyard unless the vessel can produce a record of its ballasting operations documenting the source of the ballast water.

Response: According to the Zebra Mussel and European Green Crab Task Force Report and Recommendations, Ballast Water Sub-Committee Chaired by Roberta Gunn, Executive Director, Puget Soundkeeper Alliance the current practice to reduce the risk of introductions is to the exchange ballast water that was taken on in coastal ports and replace it with open-ocean water that poses no risk to destination ports. However, most ships were not designed to handle open-ocean exchanges. This practice cannot be relied upon to solve the problem since some ships cannot safely exchange ballast in all situations. It is necessary to trim the vessel while in the water before drydocking. The condition will restrict ballast discharges only from the drydocks.

2. What is the reasoning behind removing the pH limitations in the discharge? Is there a study that was conducted at the facility indicating the low chance of this effluent to violate water quality standards?

Response: There is no reasonable potential to discharge high pH from shipyards. Stormwater pH discharged from shipyards has not been found to be a pollutant of concern in the 38 shipyards evaluated by EPA nor in the discharges from Washington shipyards nor in the five shipyards permitted in other states contacted by the Department nor is it mentioned in the 23 state survey of shipyards by the Commonwealth of Virginia. The Department concludes pH is not a pollutant at shipyards.

3. A mixing zone should not be granted to this permittee in a 303(d) listed waterway. The pollutants are not the type to wash away with current but will deposit and build up in the sediment. The mixing zone should be removed and the permittee should be responsible for meeting water quality standards at the mouth of the outfall.

Response: Puglia is planning on the same method of meeting surface water quality standards as Bellingham Bay Shipyard, discharge to the sanitary sewer.

4. The only way for Ecology to ensure that blast material and paint are not entering waters of the state is to require vessel hulls to be blasted and painted on a drydock.

Response: Abrasive blasting is prohibited while the vessel is in the water. The Department agrees waters of the state are especially vulnerable to contamination and violations of surface water quality criteria when a vessel is repaired in-water. No supporting data is included in the comment to restrict painting to less than 25 percent of the surface area above the water line.

5. It is inequitable to restrict in-water repair at boatyards to less than 25 percent and not shipyards. Prepping a vessel of greater than 65 feet in the water posses a greater risk then prepping or painting a vessel of less then 65 feet.

Response: No data supporting the inequity was submitted. The costs and availability of drydocking vessels at a shipyard is not comparable to the cost and availability of moving smaller vessels upland at a boatyard. Upland space is readily available at boatyards. The costs are about $200. The cost of drydocking and repairing a large vessel can range above $100,000. The Department agrees prepping a large vessel in water endangers state waters more than a small vessel. However, the in-water BMPs at Puglia Engineering will protect the criteria.

6. The Puget Soundkeeper Alliance supports the continued prohibition on hull cleaning below the waterline while a vessel is afloat. Support is also given to prohibition of conventional abrasive blasting and spray-paint to a vessel's hull while in the water. The public should be notified of any innovative systems which would allow these methods.

Response: The Department will attempt to notify concerned parties of new innovative methods allowed under the permit.

7. The Puget Soundkeeper Alliance is concerned that the In-Water Vessel Maintenance containment and collection BMP measures are not spelled out related to the influence of rainy windy or other unsuitable weather conditions. Should vessel hulls be permitted to be painted during the rain? How should the vessel be tarped during rain or during gusts of wind? The permit BMP section should address restrictions related to unsuitable weather conditions.

Response: The BMPs in S5.B. apply to in-water vessel maintenance. This includes a requirement that the bottom edge of tarpaulins and plastic sheeting be weighted or fastened to remain in place during windy conditions. Conventional spray painting and sand blasting of a

vessel in water are prohibited which are the best BMPs and restrictions to mitigate impacts during windy conditions. Deposition of generated particulate to waters of the state from in water work is a violation of S5.C. "These in-water activities are only allowed provided that containment and collection BMP measures are in effect to prevent the introduction of dust, dirt, debris, or any other pollutants generated from these surface preparation operations from being deposited on or entering into waters of the state."

8. The permit modifications deleted the requirement for an in-the-water paint and hull preparation pollution prevention plan. This plan was supposed to include "restrictions during unsuitable weather conditions". The Puget Soundkeeper Alliance recommends that Ecology specifically require the Spill Plan to discuss in-the-water hull painting and preparation activities because the plan insufficiently addressed unsuitable weather restrictions, recovery of wind blown paint chips or spilled gallons of paint.

Response: In-water spray painting and sandblasting are prohibited. The Department is reissuing the permit. The previous permit did not require a stormwater pollution prevention plan but did require a spill prevention plan which is retained. The conditions in S5B. and S5C. protecting state waters from in-water work must be contained in the plan.

9. The floats are too unstable to conduct hull preparation and painting activities. The one inch freeboard could be easily awash in even light wind conditions and certainly wakes from the significant vessel traffic adjacent to the MARCO facility. Any pollutants on a float with a one inch freeboard could easily be spilled and washed into surface waters.

Response: The comment should be addressed to the Department's public notice of Bellingham Bay Shipyard draft permit not MARCO. The situation described is prohibited by the condition requiring that floats at all times maintain a minimum of 1" of freeboard.

10. Any container of paint, marine coating or other liquid product for painting or surface preparation of any size should be provided with secondary containment on board a float.

Response: Spills of paint or marine coatings is a violation of the permit and RCW 90.48.080. Best management practices in spill plans is containment of one gallon or more of chemicals on floats

11. If the photographs of in-water surface preparations are not submitted to Ecology they will not help. How is water quality protected if they are kept in MARCO's office? They should be submitted monthly.

Response: The comment should be addressed to the Department's public notice of Bellingham Bay Shipyard draft permit not MARCO. Photographs will likely be by digital cameras and available by e-mail on request. Photographs will also be reviewed during Department inspections.

12. What measures is the STP taking to ensure metals are collected and not simply passed through and discharged to the bay diluted.

Response: Particulate metals will be removed in the municipal sewage treatment plant through removal of sludge in the clarifier.

13. What is the reason a full year is needed to bring the facility into compliance with surface water quality criteria. We understand that Ecology has been working with shipyards around the region on this issue for many years now and fail to see the need for yet another extension. This yard should be required to come into compliance with surface water criteria at permit issuance. If going to the sanitary sewer this should only take a few months.

Response: Re-construction of the conveyance system is necessary to re-route the Stormwater from direct discharge to the Bay to the municipal treatment plant. All construction projects are required to follow the State Environmental Policy Act procedure. Design, local permits, procurement of major equipment, contractor selection and hiring and construction need to be completed before discharge to the sanitary sewer is possible. Local permits alone could take several months.

14. North Bay Soundkeeper objects to granting a mixing zone for this facility. Metals do not readily mix and flush away. Instead they settle to the bottom. Allowing a mixing zone for metal in an area where the sediments are already contaminated with metal is absurd.

Response: We are not granting a mixing zone at this time, however, we are not precluding that option for a future time. Compliance with surface water quality standards will protect sediments. A mixing zone can be granted only in compliance with 173-201A-100(4) "No mixing zone shall be granted unless the supporting information clearly indicates the mixing zone would not …. result in damage to the ecosystem." The information must demonstrate no contribution to contamination of sediment. Puglia preferred alternative is discharge to the sanitary system. Further, granting a mixing zone will require permit modification and the Department will seek public comment.

15. Quarterly floodwater monitoring is insufficient. How are we to gain an adequate understanding of the true impacts of these facilities when they monitor only four times per year? Additionally, the fact sheet states that this facility had a number of violations during the past permit cycle. Facilities that have had compliance problems in the past should be required to monitor at least monthly.

Response: Oil and grease are characterized at less than one mg/L from both drydocks No. 1 and 2. Visual observations and recording are required to verify no visible sheen from oil and grease. The fact sheet listed metals violations not oil and grease from drydocks. Best management practices, good corporate attitude and photographic documentation of cleanup efforts will provide a real incentive to drydock cleanup. Since the monitoring has demonstrated compliance with drydock limits over the last permit cycle at Bellingham Bay and at other shipyards over extended periods, monitoring will be quarterly.

16. Who will observe "visual observation" and how will it be documented. Will there be a photo documentation or log? This is an inadequate monitoring protocol. A photo log of drydock flood water should be required similar to the excellent idea of drydock cleaning practices.

Response: Puglia will be responsible for monitoring including observation, recording and maintaining a log. Condition S2. requires a file containing a log of visible sheen observations. Photo documentation is required of the drydock floor including any oil and grease prior to launch.

17. Floats are unstable and provide little protection for hull preparation and painting activities. This is especially the case with floats with only one inch freeboard. Bellingham Bay Shipyard is located in a choppy portion of the bay and even relatively calm days the water around the yard is choppy. A float could be easily washed over even on calm days causing spill of any spilled paints or solvents on the float.

Response: The situation described is prohibited by the condition requiring that floats at all times maintain a minimum of one inch freeboard. Condition S5.D. requires cleanup efforts immediately and be completed as soon as possible taking precedence over normal work.

18. Secondary containment should be provided for all containers of paint or other liquid products whilst used on a float.

Response: Spills of paint or marine coatings is a violation of the permit and RCW 90.48.080. Best management practices in spill plans is containment of one gallon or more of chemicals on floats.

19. The limitation for oil and grease concentration changed from 10 mg/l to 5 mg/L. Bellingham Bay Shipyard requests the 10 mg/L oil and grease limitation be extended until the Department of Ecology approval of the Bellingham Bay Shipyard Engineering Report.

Response: The Department agrees to a compliance schedule for the stormwater oil and grease limit to give Puglia an opportunity to develop and improve BMPs to meet the new limit.

20. Ecology set Bellingham Bay Shipyards Maximum Daily Limitations at:

Total Recoverable Copper	2.4 mg/L
Total Recoverable Lead	1.2 mg/L
Total Recoverable Zinc	3.3 mg/L

The limitations for Foss Maritime's King County Waste Discharge Permit are:

Parameter	Daily Average Mg/L	Instantaneous Maximum Mg/L	Sample Frequency
Copper	3.0	8.0	Once per quarter
Lead	2.0	4.0	Once per quarter
Zinc	5.0	10.0	Once per quarter

Bellingham Bay Shipyard requests the limitations and sampling frequency changed to be consistent with the Foss Shipyard Permit.

Response: The limits in the draft permit are based on the Boatyard General NPDES permit for pressure wash wastewater discharges which in turn were based on METRO pretreatment limits. This level of control is achievable for boatyard pressure wash wastewater. Boatyards are a similar industry to shipyards including Puglia Engineering. Metals concentrations in stormwater are less than in pressure wash wastewater from both boatyards and shipyards. The Department concludes Puglia can achieve the same level of control for stormwater discharges as boatyards have achieved for pressure wash wastewater. AKART are the limits in the draft Bellingham Bay Permit.

21. Bellingham Bay Shipyard requests peak hour flow 10-year, 24 hour changed to 5-year, 24 hour storm. This will be consistent with the MARCO NPDES permit.

Response: The design storm will remain at the 10 year 24 hour peak flow consistent with Foss Maritime. This level of treatment is achievable by the shipyard source category as demonstrated by Foss.